DE 12-224

White Mountain Hydroelectric Corporation

P.O. Box 715
Lincoln, New Hampshire 03251
~ 603-745-2430 ~

Debra A. Howland, Executive Director
NH Public Utilities Commission
21 South Fruit Street, Suite 10
Concord, NH 03301-2429

July 24, 2012

Dear Ms. Howland:

White Mt. Hydroelectric is seeking certification as a Class IV source. Enclosed please find our application for same.

Contact information:

Peter F. Govoni
603-745-2430
pfg51@myfairpoint.net

Thomas S. Clark
603-745-3074

Yours truly,

Peter F. Govoni
Treasurer

State of New Hampshire

Public Utilities Commission

APPLICATION FORM FOR

RENEWABLE ENERGY SOURCE ELIGIBILITY FOR CLASS IV

HYDRO SOURCES WITH A TOTAL NAMEPLATE CAPACITY OF ONE MEGAWATT OR LESS

Pursuant to New Hampshire Administrative Code Puc 2500 Rules, Puc 2505.02
Application Requirements Laws of 2012, Chapter 0272

- Please submit one (1) original and two (2) paper copies of the completed application and cover letter to:

Debra A. Howland
Executive Director
New Hampshire Public Utilities Commission
21 South Fruit Street, Suite 10
Concord, NH 03301-2429

- Send an electronic version of the completed application and the cover letter electronically to executive.director@puc.nh.gov.

The cover letter must include complete contact information and clearly state that the applicant is seeking certification as a Class IV source. Pursuant to Chapter 362-F:11 I, the Commission is required to render a decision on an application within 45 days upon receiving a completed application.

If you have any questions please contact Barbara Bernstein at (603)271-6011 or Barbara.Bernstein@puc.nh.gov.

Please provide the following:

1. Applicant Name: White Mountain Hydroelectric Corp.

Mailing Address: PO Box 715

Town/City: Lincoln, State: NH Zip Code: 03251

Primary Contact: Peter F. Govoni Thomas S. Clark

Telephone: 603-745-2430 Cell: _____

Email address: pfg51@myfairpoint.net

2. Facility Name: White Mountain Hydroelectric Lisbon Plant

(physical address) 1 Hydro Blvd.

Town/City: Lisbon State: NH
Zip Code: 03585

If the facility does not have a physical address, the Latitude _____ & Longitude _

(To qualify the electrical production for RECs, the facility must be registered with the NEPOOL - GIS).

Contact information for the GIS administrator follows:

James Webb, Registry Administrator, APX Environmental Markets
224 Airport Parkway, Suite 600, San Jose, CA 95110
Office: 408.517.2174, jwebb@apx.com

3. The facility's ISO-New England asset identification number, if available. 894

4. The facility's GIS facility code, if available. n/a

5. A description of the facility including the following:

   5.a. The gross nameplate capacity 2 units 600 KW total

   5.b. The facility's initial commercial operation date 12/29/86

   5.c. The date the facility began operation, if different than the operation date _____

   5.d. A complete description of the facility including related equipment

The Lisbon power plant consists of two (2) vertical machines, each rated at approximately 300 KW, 4160 volts. One machine is a Kaplan style runner while the other machine is a propellor style runner.

6. A copy of all necessary state and federal (FERC) regulatory approvals as **Attachment A.** 6 total pages.

7. A copy of the title page of the Interconnection Agreement between the applicant and the distribution utility, the page(s) that identifies the nameplate capacity of the facility and the signature pages. Please provide this information as **Attachment B. 3 total pages.**

8. A description of how the generation facility is connected to the distribution utility.

Each machine is voltage and var regulated. The two machines each power a common in-house 4160 volt bus. From the 4160 volt bus the output of the machines is connected to the secondary (4160 volt) side of the GSU transformer thru a bus tie breaker. The high side of the GSU transformer is connected to the Public Service of New Hampshire (PSNH) 34.5 KV grid via a 3 phase gang operated disconnect switch and fuses selected by PSNH.

The utility ties interconnect protection requirements for the installed protection package was specified by PSNH. This protection package is tested for compliance each year per requirements of PSNH

9. A statement as to whether the facility has been certified under another non-federal jurisdiction's renewable portfolio standard and proof thereof.

White Mt. Hydro is not certified under any other non-federal jurisdiction's renewable portfolio standard.

10. A statement as to whether the facility's output has been verified by ISO-New England.

Yes

11. An affidavit by the applicant attesting that the contents of the application are accurate. Use either the Affidavit at the bottom of this page, or provide a separate document as **Attachment C.**

12. The name and telephone number of the facility's operator, **if different from the owner.**

Facility Operator Name: Thomas S. Clark

Phone: 603-745-3074

13. Other pertinent information that you wish to include to assist in classification of the facility provide as **Attachment D.**

CHECK LIST: The following has been included to complete the application:	**YES**
• All contact information requested in the application.	X

• A copy of all necessary state and federal (FERC) regulatory approvals as **Attachment A.**	X
• A copy of the title page of the Interconnection Agreement between the applicant and the distribution utility, the page(s) that identifies the nameplate capacity of the facility and the signature pages as **Attachment B.**	X
• A signed and notarized attestation or **Attachment C.**	X
• A GIS number has been provided or has been requested.	X
• Other pertinent information has been provided (if necessary) as **Attachment D.**	
• This document has been printed and notarized.	X
• The original and two copies are included in the packet mailed to Debra Howland, Executive Director of the PUC.	X
• An electronic version of the completed application has been sent to executive.director@puc.nh.gov .	X

AFFIDAVIT

The Undersigned applicant declares under penalty of perjury that contents of this application are accurate.

Applicant's Signature _____ Date 7/24/12

Subscribed and sworn before me this 24 Day of July 2012 (month) in the year

County of GRAFTON State of New Hampshire

Cindy Simmons
Notary Public/~~Justice of the~~ Peace

My Commission Expires _____

OFFICIAL SEAL
CINDY E. SIMMONS
NOTARY PUBLIC - N.H.
My Comm. Expires March 30, 2016

Toms Copy

A

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

APPLICATION FOR EXEMPTION
OF
SMALL HYDROELECTRIC POWER PROJECT FROM LICENSING

LISBON HYDROELECTRIC REDEVELOPMENT PROJECT

Project No. 3464-NH

APPLICANT
WHITE MOUNTAIN HYDROELECTRIC CORPORATION
LINCOLN, NEW HAMPSHIRE

BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

APPLICATION FOR
EXEMPTION OF SMALL HYDROELECTRIC POWER PROJECT FROM LICENSING

1.0 Statement of Application

White Mountain Hydroelectric Corporation hereby applies to the Federal Energy Regulatory Commission for an Exemption for the hydroelectric development at Lisbon dam as described in the attached exhibits. This project is proposed to have an installed capacity of 5 megawatts or less as required for exemption from licensing in the Federal Power Act.

2.0 Project Location

State: - New Hampshire
County: - Grafton
Town: - Lisbon
River: - Ammonoosuc

3.0 Applicant Name and Address

White Mountain Hydroelectric Corporation
Pesthouse Road
Lincoln, NH 03251

4.0 Authorized Agents for Applicant

John M. A. Rolli
126 Main Street
Littleton, NH 03561

Edward M. Clark
Pesthouse Road
Lincoln, NH 03251

5.0 Form of Organization

White Mountain Hydroelectric Corporation is an association of citizens of the United States; incorporated under the laws of the state of New Hampshire and is the project owner. Enclosed is a copy of ownership document of the Lisbon Project by WMHC.

White mtn Hydro - Lisbon Station
Tom Clark
Lisbon N.H. 03585

The existing project utilized two turbines:

1 - Leffel - 46" 225HP
1 - Holyoke - 46" 225HP

and one General Electric AC generator - 150 KW - 2300 V - 47 A 60 cycle - 3 phase. The units were removed in the late fifties or early sixties and the plant shut down. The facility belonged to the Public Service Company of New Hampshire and was purchased by the applicant in July 1982.

The project is located on a granite rock ledge at a natural fall through the town of Lisbon. WMHC plans to repair the existing concrete dam and build a new open canal just west of the original canal, construct a new powerhouse west of and adjacent to the existing powerhouse and install two re-built runners and generators.

1 - S. Morgan Smith - 164rpm - 446HP
1 - S. Morgan Smith - 150rpm - 463HP
Both with Electric Machinery generators
Both vertical machines

The proposed canal will require excavating the existing channel from the waste gate 115 feet upstream to a total depth of nine feet. This will be approximately 238 c.y. of ledge excavation. The present channel varies in depth from five to six feet thus three to four feet of ledge must be removed. Also approximately 1000 c.y. of ledge will be excavated for the proposed concrete canal and this is all in the dry. The powerhouse will require approximately 345 c.y. of ledge excavation for the footings and the draft tubes and the existing tailrace must be cleaned out.

WMHC plans to begin repairs and construction by late summer 1982 or whenever this exemption application is approved.

Our economic analysis indicates that a revenue of 80 mils per Kilowatt hour is needed for the project to be economical. The New Hampshire Public Utilities Commission authorized a standard rate of between 77 mils and 82 mils per kilowatt hour. The power will be sold to PSNH as they are the franchised company in this area.

EXHIBIT A

The Lower Lisbon dam is located in the Town of Lisbon on the Ammonoosuc River at 44°12.9' north latitude and 71°51.8' west latitude. The dam is in the center of town, immediately upstream of the School Street Bridge across the Ammonoosuc River. The dam is a concrete gravity run-of-the-river dam with an overall length of 300 feet and a maximum height of 24 feet. The existing powerhouse and headrace canal located on the left side of the dam have been closed and filled. A single waste gate is located just upstream of the old head gates and canal. Exhibits B and G included herein show the general layout of the project.

Table 1 below gives necessary statistics:

TABLE 1

ELEVATION	FEET (USGS)
Streambed at centerline of dam	550.3
Recreational Pool	566.5
Spillway Crest	566.3
Top of Dam	575.7
Test flood design surcharge	576.8
RESERVOIR	**FEET**
Length of maximum pool	8000
Length of recreational pool	6000
STORAGE	**ACRE-FEET**
Recreational pool	96
Test flood pool	448
Spillway crest pool	96

RESERVOIR SURFACE	ACRES
Top of dam	64
Test flood pool	64
Recreational pool	24
Spillway crest	24

DAM

Type - concrete, gravity , run-of-river.

Length - 300 feet (overall)

Height - 24 feet (maximum)

Top width - 3 feet (more or less)

Side slopes - vertical upstream, ogee weir downstream

Impervious core - solid concrete dam

Foundation - ledge

Drains - brick drain along foundation

SPILLWAY

Type - modified ogee weir

Length of weir - 228 feet (two sections 222' + 6')

Crest elevation - 566.3.

Gates - none

Upstream channel - Ammonoosuc River. Variable width 200 - 400 feet

Downstream channel - Ammonoosuc River. Ledge rock bed, 150 - 200 feet in width.

REGULATING OUTLETS

Waste gate 5 feet wide and 11'-4" deep with an invert elevation of approximately 555. This gate may also act as a spillway when the water elevation increases.

STORAGE

Negligible

CANAL

Proposed new reinforced concrete canal from the existing old head gate wall to the new powerhouse located on the river side of the old canal which has been filled in. The new canal will be approximately 12' deep and 24' in width with a carrying capacity of about 1000 cfs at a velocity of 3.5 fps.

POWERHOUSE

Proposed new powerhouse adjacent to and on the river side of the old existing brick powerhouse. The new powerhouse will be approximately 44' x 32' and constructed of reinforced concrete and concrete blocks. The construction of the new powerhouse will entail the removal of some ledge for the draft tubes as well as the tailrace.

POWERPLANT

Rating

1- unit @ 325 kw
1- unit @ 350 kw

Manufacturer

S. Morgan Smith turbines
Electric Machinery generators.

Operating head

16'

Hydraulic Capacity

300 - 400 cfs for each

Plant factor

57%

Annual output

2,225 MWh

Customer

Power output is proposed for sale to Public Service Company of New Hampshire under rates established by the New Hampshire Public Service Commission pursuant to the Public Utility Regulatory Policies Act.

B

UPDATED

PSNH INTERCONNECTION REPORT FOR

CUSTOMER GENERATION

LISBON DAM HYDRO

SESD SITE NO. 025

White Mt Hydro
Po Box 715
Lincoln, NH. 03251

P. C. Martin
December 17, 1996

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I. INTRODUCTION

A study has been performed to determine the impact of this proposed facility on the PSNH system. All technical analysis was based on the equipment listed under Section II, and the facility arrangement illustrated on partial one-line diagram SK-PCM-025-6. Where actual site-specific data was not readily available, estimated or "typical" values were utilized in any required calculations. Any deviation from the listed equipment or the illustrated configuration may have significant safety and/or technical ramifications. Consequently, if changes are anticipated now or in the future, PSNH should be informed immediately so that the requirements and recommendations contained within the report may be revised where necessary. This procedure will ensure that the Developer is informed of PSNH requirements in a timely fashion and should eliminate the delays and expense which could otherwise be experienced by the Developer.

II. DESCRIPTION OF MAJOR COMPONENTS

A. Description of Facilities

The Developer will install multiple water powered generators having a combined output of less than 1MW. However, because it had been determined that this power must be delivered to the PSNH 34.5 kV system, the Developer was allowed to temporarily run a single 375 KVA (estimated) generator on the existing Lisbon 20H1 4.16 kV circuit. This report defines the requirements for less than 1MW as delivered to the PSNH 34.5 kV system.

One more rewound, 375 KVA (approximate) synchronous generator will be installed as the next stage in the development of this site, for a total of two similar units. The site is located in Lisbon, N.H. and will use water taken from the Ammonoosuc River (N.H. W.R.B. Dam #138.01). Station service (separately metered) will be taken from transformers on the converted 19.9/34.5 kV circuit near the plant tie to PSNH.

Future plans for the addition of induction units are not complete at this time. The total site capacity must be less than 1MW and the induction unit control and protection must be reviewed prior to installation.

Sketch SK-PCM-025-6 shows the facility in one-line fashion.

B. Mechanical Components

1. (1) S. Morgan Smith 72" turbine, and (1) S. Morgan Smith 65" turbine

2. Woodward governors

C. Electrical Components

1. Generators - (1) 375 KVA (re-wound) 2.4/4.16 kV, G.E. Synchronous
   (1) 375 KVA (re-wound) 2.4/4.16 kV, Electric Machinery Synchronous

2. Exciters - 1 G.E. 13 kw, 1 Electric Machinery 15 kw